

What is claimed is:

1. A transfective liquid crystal display device comprising a liquid crystal element composed of liquid crystal sandwiched between a first substrate and a second substrate, and a transfective layer installed on an
5 inside of the first substrate,

wherein the transfective layer is a thin metal film having transparent portions formed by means of anodic oxidation.

2. A transfective liquid crystal display device comprising a liquid crystal element composed of liquid crystal sandwiched between a first
10 substrate and a second substrate, and a transfective layer installed on an inside of the first substrate, a first polarizing film disposed on an outside of the second substrate of the liquid crystal element, a second polarizing film and a backlight, disposed in sequence on an outside of the first substrate,

- wherein the transfective layer is a thin metal film having transparent
15 portions formed by means of anodic oxidation.

3. A transfective liquid crystal display device according to claim 2, comprising the transfective layer and first electrodes on an inner face of the first substrate, and second electrodes on an inner face of the second substrate, wherein the liquid crystal is nematic liquid crystal of twisted
20 alignment, a first optical compensatory element is disposed between the first polarizing film and the second substrate, and a second optical compensatory element is disposed between the first substrate and the second polarizing film.

4. A transfective liquid crystal display device according to claim 2, wherein the nematic liquid crystal is supertwisted nematic liquid
25 crystal having a twist angle in a range of 180 to 260°.

5. A transfective liquid crystal display device according to claim 1, wherein pits and projections are provided on a surface of an untransparent

portion of the transfective layer, thereby forming a scattering layer.

6. A transfective liquid crystal display device according to claim 1, wherein a scattering layer is installed on an outside of the second substrate of the liquid crystal element.

5 7. A transfective liquid crystal display device according to claim 3, wherein the first optical compensatory element is composed of one sheet of retardation film, or a plurality of sheets of retardation films.

8. A transfective liquid crystal display device according to claim 3, wherein the first optical compensatory element is composed of a
10 twisted retardation film.

9. A transfective liquid crystal display device according to claim 3, wherein the first optical compensatory element is composed of a twisted retardation film, and one sheet of retardation film or a plurality of sheets of retardation films.

10 10. A transfective liquid crystal display device according to claim 1, wherein color filters in a plurality of colors are installed on either the first substrate or the second substrate of the liquid crystal element.

11. A transfective liquid crystal display device according to claim 1, wherein the transfective layer is a thin aluminum film provided with
20 transparent portions made of aluminum oxide.

12. A transfective liquid crystal display device according to claim 2, wherein the transfective layer is a thin aluminum film provided with transparent portions made of aluminum oxide.

13. A transfective liquid crystal display device according to claim 1, wherein an oxide film formed by anodic oxidation is provided on an
25 untransparent portion of the transfective layer.

14. A transfective liquid crystal display device according to claim 2,

Sub
Pole
Device

Sub
A
B
C

wherein crossover points of the first electrodes and the second electrodes, opposed to each other, inside the liquid crystal element constitute respective pixels, and the transparent portions of the transfective layer are provided at positions corresponding to the respective pixels.

5 15. A transfective liquid crystal display device according to claim 14, wherein an area ratio of the transparent portions to the transfective layer is in a range of 5 to 30%.

10 16. A transfective liquid crystal display device according to claim 14, wherein each of the transparent portions of the transfective layer is formed in a slit shape at a position corresponding to a plurality of the pixels in succession.

17. A transfective liquid crystal display device according to claim 16, wherein an area ratio of the transparent portions to the transfective layer is in a range of 5 to 30%.

15 18. A transfective liquid crystal display device according to claim 1, wherein a protective film formed of a transparent and insulating material is installed for covering the transfective layer on the first substrate of the liquid crystal element.

20 19. A transfective liquid crystal display device according to claim 2, wherein a protective film formed of a transparent and insulating material is installed between the transfective layer and the first electrodes, on the first substrate of the liquid crystal element.

Sub
A
B
C

25 20. A transfective liquid crystal display device according to claim 3, wherein a protective film formed of a transparent and insulating material is installed between the transfective layer and the first electrodes, on the first substrate of the liquid crystal element.

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